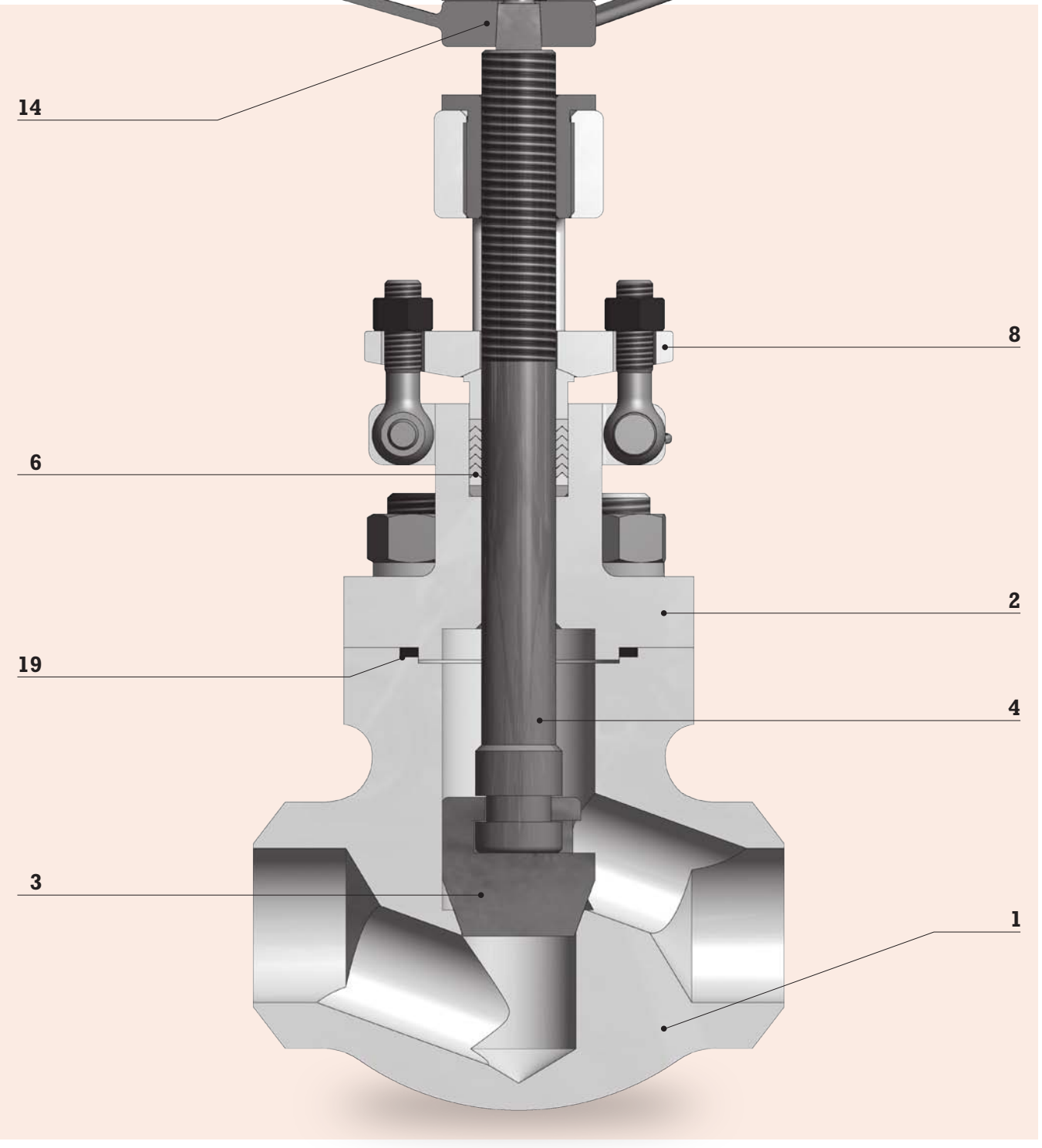
GLT | Globe Valves T Pattern

Max 450°C

Mesohigh Press.



Identification of the Valve Parts

Item	Part Name
1	Body
2	Bonnet

Item	Part Name
3	Disc
4	Stem
6	Packing
8	Gland Flange

Item	Part Name
14	Handwheel
19	Body-Bonnet Gasket

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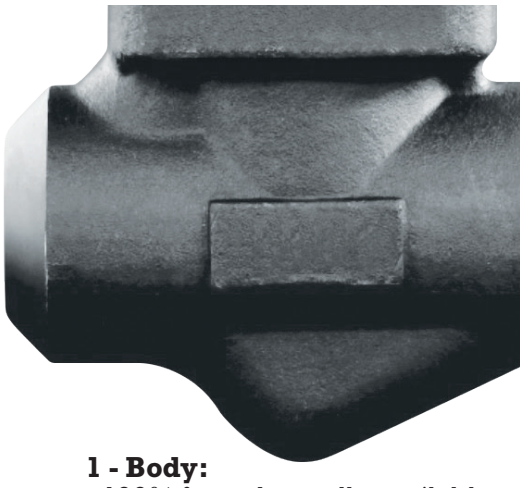
Construction Feature



1 - Body:
- 100% forged, usually available in carbon steel. Other materials available on request.
- Integral seat is hard surfaced with stellite Gr. 6, deposited with high precision automated procedure, which guarantees constant uniform characteristics for shut off and long life.
- The fine machining of the guiding disc area inner body and the disc guide can guarantees a perfect alignment between disc and seating and insures the sealing.

2 - Bonnet:
- Same material as the body.
- The connection type includes: bolted to body with gasket sealing and pressure seal all the way, allows easy disassembly of the valve for inspection or maintenance.
- Narrow and long packing chamber can guarantee the effectiveness of the packing sealing.
- The backseat is integrally machined and isolates the packing chamber from the line pressure.
- On request backseat can be supplied with austenitic stainless steel or stellited hard face.
- Yoke design permits easy installation and removal of packing.

3 - Disc:
- It can revolve around the stem with which it is axially connected.
- The disc is pushed against the seat with axial movement.
- Fully guided in the body to prevent vibration in any position and also to avoid side thrust against the stem.
- Usually made of 13% Cr stainless steel with a thick stellited hard face, the design allows several surface repairs of the seating surface.

4 - Stem:
- ASTM A479 410 stainless steel etc., heat treated against corrosion and to achieve best mechanical characteristics, or of other materials on request.
- Threads are of the ACME type. Surfaces are carefully machined for a longer life of the packing and yoke bushing threads.

6 - Packing:
- Packing is made of an adequate number of preformed rings in graphite as standard, but special materials are available upon request.

8 - Gland Flange:
- The gland consisting of gland and gland flange can effectively compact the packing automatically.
- Its design permits easy removal and allows ample space for repacking.

14 - Hand Wheel:
- Made of malleable cast iron. Its contour permits sure grip. A pyramid shaped square connection provides a perfect fit on the stem. Fixed on stem by hexagon nut and locking washer.
- Handwheel is available on request instead of handle.

19 - Body-Bonnet Gasket:
- It is a spiral wound of stainless steel, located in the U-shape groove between body and bonnet to guarantee fully sealing.

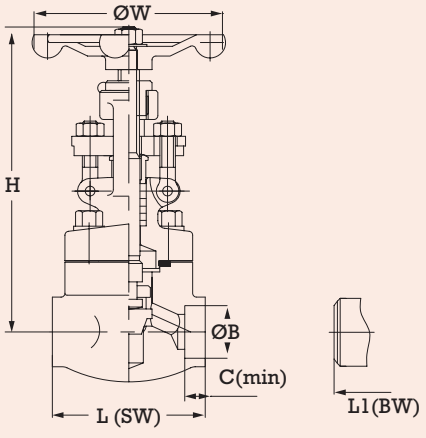
Operation Type

- **E:** Electric Actuator
- **M:** Manual
- **P:** Pneumatic Actuator.

Material Schedule

Item	Component	71	11	22	31	91
1	Body	ASTM A105	ASTM A182 F11	ASTM A182 F22	ASTM A182 F316	ASTM A182 F91
2	Bonnet	ASTM A105	ASTM A182 F11	ASTM A182 F22	ASTM A182 F316	ASTM A182 F91
3	Disc	ASTM A105+STL	ASTM A182 F11+STL	ASTM A182 F22+STL	ASTM A479 316+STL	ASTM A182 F91+STL
4	Stem	ASTM A479 410	ASTM A479 410	ASTM A479 410	ASTM A182 F316H	ASTM A453 Gr.660
5	Packing Gasket	ASTM A276 420	ASTM A276 420	ASTM A276 420	ASTM A276 316	ASTM A276 420
6	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
7	Gland	ASTM A276 420	ASTM A276 420	ASTM A276 420	ASTM A182 F316	ASTM A276 420
8	Gland Flange	ASTM A105	ASTM A105	ASTM A105	ASTM A182 F316	ASTM A105
9	Gland Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8M	ASTM A193 B7
10	Gland Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8M	ASTM A194 2H
11	Bonnet Bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8M	ASTM A193 B7
12	Stem Nut	ASTM A276 420	ASTM A276 420	ASTM A276 420	ASTM A276 420	ASTM A276 420
13	Screw	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8M	ASTM A193 B7
14	Handwheel	ASTM A197	ASTM A197	ASTM A197	ASTM A197	ASTM A197
15	Flange Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8M	ASTM A194 2H
16	Name Plate	304	304	304	304	304
17	Washer	140HV	140HV	140HV	140HV	140HV
18	Bolt Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8M	ASTM A194 2H
19	Body-Bonnet Gasket	SS316+Graphite	SS316+Graphite	SS316+Graphite	SS316+Graphite	SS316+Graphite

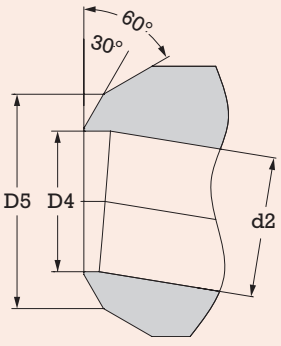
Connections & Dimensions



Model		Size inches	L mm	L1 mm	W mm	B mm	C mm	H mm
GLT007IT/RE06	150-600LB	3/4	92	100	27.2	13	14.5	158
GLT010IT/RE06	71/11/22/31/91	1	111	111	125	33.9	13	192
GLT015IT/RE06	GR	1 1/2	152	152	160	48.8	13	241
GLT020IT/RE06		2	172	172	180	61.2	16	279
GLT005IT/RE09	900LB	3/4	111	111	125	27.2	13	187
GLT007IT/RE09	71/11/22/31/91	1	120	120	160	33.9	13	211
GLT010IT/RE09	GR	1 1/2	172	172	180	48.8	13	258
GLT015IT/RE09		2	220	220	200	61.2	16	301
GLT005IT/RE15	1500LB	3/4	111	111	125	27.2	13	187
GLT007IT/RE15	71/11/22/31/91	1	120	120	160	33.9	13	211
GLT010IT/RE15	GR	1 1/2	172	172	180	48.8	13	258
GLT015IT/RE15		2	220	220	200	61.2	16	301
GLT007IT/RE25	2500LB	3/4	150	150	200	27.2	13	293
GLT010IT/RE25	71/11/22/31/91	1	170	170	200	33.9	13	344
GLT015IT/RE25	GR	1 1/2	200	200	300	48.8	13	383
GLT020IT/RE25		2	230	230	300	61.2	16	442

Connections

1. Butt Weld (B.W.) Connections DIN 3239



SIZE		PN100		PN160		PN250		PN320		PN400		PN640	
mm	inch	D4	D5	D4	D5	D4	D5	D4	D5	D4	D5	D4	D5
10	3/8	13	20	13	20	12	20	12	20	10	20	11	24
15	1/2	17	24	17	24	16	24	15	24	17	31	16	25
25	1	28	37	27	37	27	39	24	39	28	48	24	52
40	1-1/2	43	54	41	54	38	54	35	54	39	57	34	72
50	2	54	67	52	67	47	67	47	71	49	83	46	92
65	2-1/2	70	83	65	83	59	83	65	96	68	110	-	-
80	3	82	96	76	96	79	110	76	110	76	122	-	-
100	4	106	121	97	121	97	129	-	-	-	-	-	-

Note:

1. When ordering valves with butt weld connections, please indicate size of pipe to be welded to valve.

2. Dimension d2 depends on requested PN.

2. Butt Weld (B.W.) Connections ASME B 16.25

Fig. A

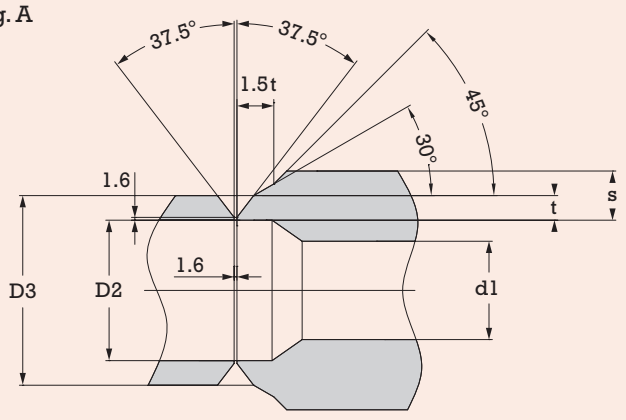
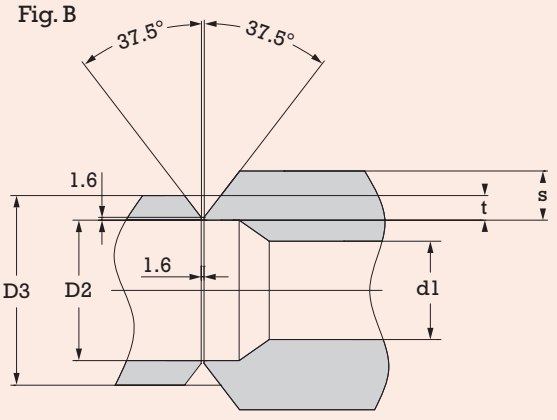


Fig. B



Dimension of Pipes, according to ASME B 36.10

Size	Schedule 80 D3	Schedule 80 t	Schedule 160 D3	Schedule 160 t	Schedule XXS D3	Schedule XXS t
in.	mm. in.	mm. in.	mm. in.	mm. in.	mm. in.	mm. in.
1/2	21.3	3.73	21.3	4.78	21.3	7.47
	0.840	0.147	0.840	0.188	0.840	0.294
3/4	26.7	3.91	26.7	5.56	26.7	7.82
	1.050	0.154	1.050	0.219	1.050	0.308
1	33.4	4.55	33.4	6.35	33.4	9.09
	1.315	0.179	1.315	0.250	1.315	0.358
1 1/2	48.3	5.08	48.3	7.14	48.3	10.15
	1.900	0.200	1.900	0.281	1.900	0.400
2	60.3	5.54	60.3	8.74	60.3	11.07
	2.375	0.218	2.375	0.344	2.375	0.436
2 1/2	73	7.01	73	9.53	73	14.02
	2.875	0.276	2.875	0.375	2.875	0.552
3	88.9	7.62	88.9	11.13	88.9	15.24
	3.500	0.300	3.500	0.438	3.500	0.600
4	114.3	8.56	114.3	13.49	114.3	17.12
	4.500	0.337	4.500	0.531	4.500	0.674

Note:

1. Fig. A: Applicable for thickness of valve wall s > 22.2 mm.

2. Fig.B: Applicable for thickness of valve wall s ≤ 22.2 mm.

3. Dimension d1 depends on requested Schedule.

Rating Table

Temperature - Pressure

Temp. °C	Max Operating Pressure (bar)												
	Class 600 Material Code				Class 900 Material Code				Class 1700 Material Code				
	71	11	22	31	71	11	22	31	71	11	22	31	91
-29 +38	102.1	103.4	103.4	99.3	153.2	155.1	155.1	148.9	289.3	293.1	293.1	281.3	293.1
50	100.2	103.4	103.4	96.2	150.4	155.1	155.1	144.3	284.0	293.1	293.1	272.7	293.1
100	93.2	103.0	103.0	84.4	139.8	154.4	154.6	126.6	264.1	291.7	292.0	239.1	292.0
150	90.2	99.5	100.3	77.0	135.2	149.2	150.6	115.5	255.4	281.9	284.3	218.2	284.3
200	87.6	95.9	97.2	71.3	131.4	143.9	145.8	107.0	248.2	271.8	275.8	202.1	275.8
250	83.9	92.7	92.7	66.8	125.8	139.0	139.0	100.1	237.7	262.7	262.7	189.1	262.7
300	79.6	85.7	85.7	63.2	119.5	128.6	128.6	94.9	225.6	242.9	242.9	179.2	242.9
325	77.4	82.6	82.6	61.8	116.1	124.0	124.0	92.7	219.4	234.1	234.1	175.0	234.1
350	75.1	80.4	80.4	60.7	112.7	120.7	120.7	91.0	212.8	227.9	227.9	171.8	227.9
375	72.7	77.6	77.6	59.8	109.1	116.5	116.5	89.6	206.1	219.9	219.9	169.3	219.9
400	69.4	73.3	73.3	58.9	104.2	109.8	109.8	88.3	196.7	207.5	207.5	166.8	207.5
425	57.5	70.0	70.0	58.3	86.3	105.1	105.1	87.4	163.0	198.4	198.4	165.1	198.4
450	46.0	67.7	67.7	57.7	69.0	101.4	101.4	86.5	130.3	191.6	191.6	163.4	191.6
475	34.9	63.4	63.4	57.3	52.3	95.1	95.1	86.0	98.8	179.3	179.3	162.5	179.3
500	23.5	51.5	56.5	56.5	35.3	77.2	84.7	84.7	-	145.8	159.7	159.7	159.7
538	11.8	29.8	36.9	50.0	17.7	44.7	55.3	75.2	-	84.4	104.5	142.2	142.2
550	-	25.4	31.3	49.8	-	38.1	46.9	74.8	-	72.0	88.6	141.5	141.5
575	-	17.6	21.1	47.9	-	26.4	31.6	71.8	-	49.9	59.6	135.7	135.7
600	-	12.2	13.8	39.8	-	18.3	20.7	59.7	-	-	-	112.8	-
625	-	8.5	8.9	31.6	-	12.8	13.4	47.4	-	-	-	89.6	-
650	-	5.7	5.7	25.3	-	8.5	8.5	38.0	-	-	-	71.7	-
675	-	-	-	20.6	-	-	-	31.0	-	-	-	58.5	-
700	-	-	-	16.8	-	-	-	25.1	-	-	-	47.5	-
725	-	-	-	14.0	-	-	-	21.0	-	-	-	39.6	-
750	-	-	-	11.7	-	-	-	17.6	-	-	-	33.2	-
775	-	-	-	9.0	-	-	-	13.7	-	-	-	25.8	-
800	-	-	-	7.0	-	-	-	10.5	-	-	-	19.8	-
816	-	-	-	5.9	-	-	-	8.6	-	-	-	16.0	-

Note:

1. Ratings of tables are those indicated by ASME B 16.34 for Classes 600 - 900 - 4500 and extrapolated for Classes 1700 - 2700.

2. Because of possible transformation of carbide phases of carbon steel into graphite. ASME B 16.34 does not recommend the use of Carbon steel valves over 800°F (425°C) for extended periods.

3. Same standard does not recommend the use for extended periods of valves with body of ASME A182 F22 steel over 1103°F (595°C).

Temp. °C	Max Operating Pressure (bar)									
	Class 2700 Material Code					Class 4500 Material Code				
	71	11	22	31	91	71	11	22	31	91
-29 +38	459.5	465.4	465.4	446.8	465.4	765.9	775.7	775.7	744.6	775.7
50	451.1	465.4	465.4	433.0	465.4	751.9	775.7	775.7	721.7	775.7
100	419.4	463.3	463.8	379.7	463.8	699.0	772.2	773.0	632.9	773.0
150	405.7	447.7	451.7	346.5	451.7	676.1	746.2	752.8	577.4	752.8
200	394.2	431.6	437.8	321.0	437.8	657.0	719.4	729.8	534.9	729.8
250	377.5	417.1	417.1	300.4	417.1	629.1	694.8	694.8	500.6	694.8
300	358.4	385.7	385.7	284.6	385.7	597.3	642.6	642.6	474.3	642.6
325	348.4	371.8	371.8	278.0	371.8	580.7	619.6	619.6	463.3	619.6
350	338.0	362.1	362.1	272.9	362.1	563.5	603.3	603.3	454.9	603.3
375	327.3	349.1	349.1	268.9	349.1	545.5	581.8	581.8	448.2	581.8
400	312.4	329.3	329.3	264.9	329.3	520.8	548.5	548.5	441.6	548.5
425	258.9	314.9	314.9	262.3	314.9	431.5	524.7	524.7	437.1	524.7
450	207.0	304.3	304.3	259.6	304.3	345.1	507.0	507.0	432.7	507.0
475	156.9	285.0	285.0	258.0	285.0	261.5	474.8	474.8	430.1	474.8
500	-	231.6	253.8	253.8	253.8	176.3	385.9	423.0	423.0	423.0
538	-	134.0	166.0	225.6	225.6	88.6	223.4	276.6	375.8	375.8
550	-	114.4	140.7	224.6	224.6	-	190.6	234.5	374.2	374.2
575	-	79.3	94.7	215.5	215.5	-	132.0	157.9	359.1	359.1
600	-	-	-	179.2	-	-	91.6	103.3	298.6	292.5
625	-	-	-	142.3	-	-	63.9	66.9	237.2	219.1
650	-	-	-	113.9	-	-	42.6	42.6	189.9	148.9
675	-	-	-	92.9	-	-	-	-	154.8	-
700	-	-	-	75.4	-	-	-	-	125.7	-
725	-	-	-	62.9	-	-	-	-	104.8	-
750	-	-	-	52.8	-	-	-	-	87.9	-
775	-	-	-	41.0	-	-	-	-	68.4	-
800	-	-	-	31.5	-	-	-	-	52.6	-
816	-	-	-	25.7	-	-	-	-	42.7	-

4. Utilization of valves with body of ASTM A182 F316 with temperatures over 1000°F (538°C) up to 1500°F(816°C) should be evaluated each time, taking into consideration fluid corrosion specifications and possible thermal stresses.

5. As the Valves are oversized versus International Standard prescription, including ASME B 16.34, effective maximum operating condition can be communicated on request.